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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/639,850	08/16/2000	Toshihiro Endo	0250-814	2448

22204 7590 08/14/2002

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EXAMINER

CRENSHAW, MARVIN P

ART UNIT PAPER NUMBER

2854

DATE MAILED: 08/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/639,850	Applicant(s) ENDO ET AL.	
	Examiner Marvin P. Crenshaw	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 4 and 5 is/are allowed.
- 6) ☒ Claim(s) 6 and 7 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- | | |
|---|--|
| 15) <input type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 20) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Allowable Subject Matter

Claims 8,4 and 5 are allowed.

As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Claim Objections

Claims 2 and 3 are objected to because of the following informalities: In claims 2 and 3, instead of the stress being applied to the diaphragm pump being "not larger than" 75%, shouldn't it be "less than" 75%. Being the way it is now, the structure of the claims is limited to 75% and less than 75% for the elastic limit as with the independent claim it is less than 75%. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Black et al. in view of Miller et al. and further in view of applicant.

Black et al. teaches a stencil printer (Fig. 7) comprising an ink supply pump in the form of a diaphragm pump (Col. 5, lines 6-11). However Black et al. doesn't teach the use of

a silicone rubber and the swelling ratio of 1.05. Miller et al. teaches a diaphragm pump which is made of silicone rubber (col. 3, lines 57-61). It would be obvious to modify Black et al. to have a diaphragm pump made of silicon rubber as taught by Miller et al. because of the elastic properties of silicon rubber is more advantageous in use as a material for a pump to pump liquid.

Since the applicant has noted that silicone rubber is known to have a swelling Ratio (see page 8, lines 4-10 and Table 3 of the present specification) to the ink of less than 1.05, it would be inherent that Black et al. as modified by Miller et al. would have the diaphragm pump being made of silicone rubber which possesses the swelling ratio as recited.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Black et al. in view of Kawahata et al.

Black et al. teaches a stencil printer (Fig. 7) comprising an ink supply pump in the form of a diaphragm pump (Col. 5, lines 6-11), except for using ultraviolet ray curing ink. Kawahata et al. teaches using ultraviolet ray curing ink in a screen printing environment (col. 6, line 30-40). It would have been obvious to one of ordinary skill in the art to provide the stencil apparatus of Miller et al. with ultraviolet ray curing ink as taught by Kawahata et al. in order to have a faster drying ink.

Respons to Argum nts

Applicant's arguments filed 5/21/02 have been fully considered but they are not persuasive. Specifically, Black et al. teaches a stencil printer using a diaphragm pump. Also, with the added art of Miller et al. and Kawahata et al., they meet the structure that is claimed. Additionally, in so far as diaphragm pumps are concerned the patent to Miller et al. is considered analogous art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marvin P. Crenshaw whose telephone number is (703) 308-0797. The examiner can normally be reached on Monday - Friday 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (703) 305-6619. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



MPC
August 9, 2002



REN YAN
PRIMARY EXAMINER